Electronic Supplementary Material (ESI) for RSC Advances.
This journal is © The Royal Society of Chemistry 2022

Electronic Supplementary Information (ESI) for RSC Advances
This journal is © The Royal Society of Chemistry 2022

Supporting Information

PSS-dispersed dopamine triggered formation of PAA adhesive hydrogel as flexible wearable sensors

Xinyu He[a,b], Nuan Wen[a,b], Wei Zhang[a,b], Shuai He[a,b], Shuang Yang[a,b], Xinhua Li[a,b], Chaoxi Chen[c]* and Fang Zuo[a,b]*

a. College of Chemistry & Environment, Southwest Minzu University, Chengdu 610041, China.
b. Key Laboratory of Pollution Control Chemistry and Environmental Functional Materials for Qinghai-Tibet Plateau of the National Ethnic Affairs Commission, Southwest Minzu University, Chengdu 610041, China.
c. College of Animal Science & Veterinary Medicine, Southwest Minzu University, Chengdu 610041, China.

This File Includes:

Supplementary Figures S1 to S7

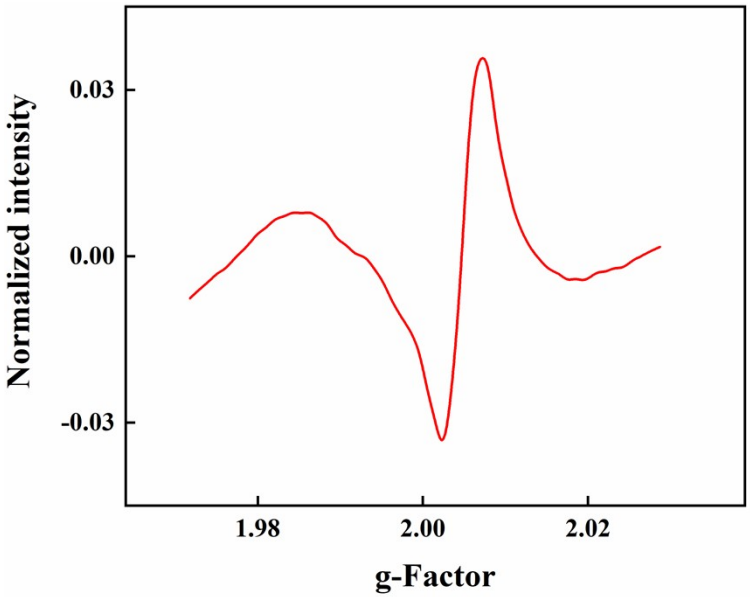

Figure S1 The ESR signals of DA:PSS.

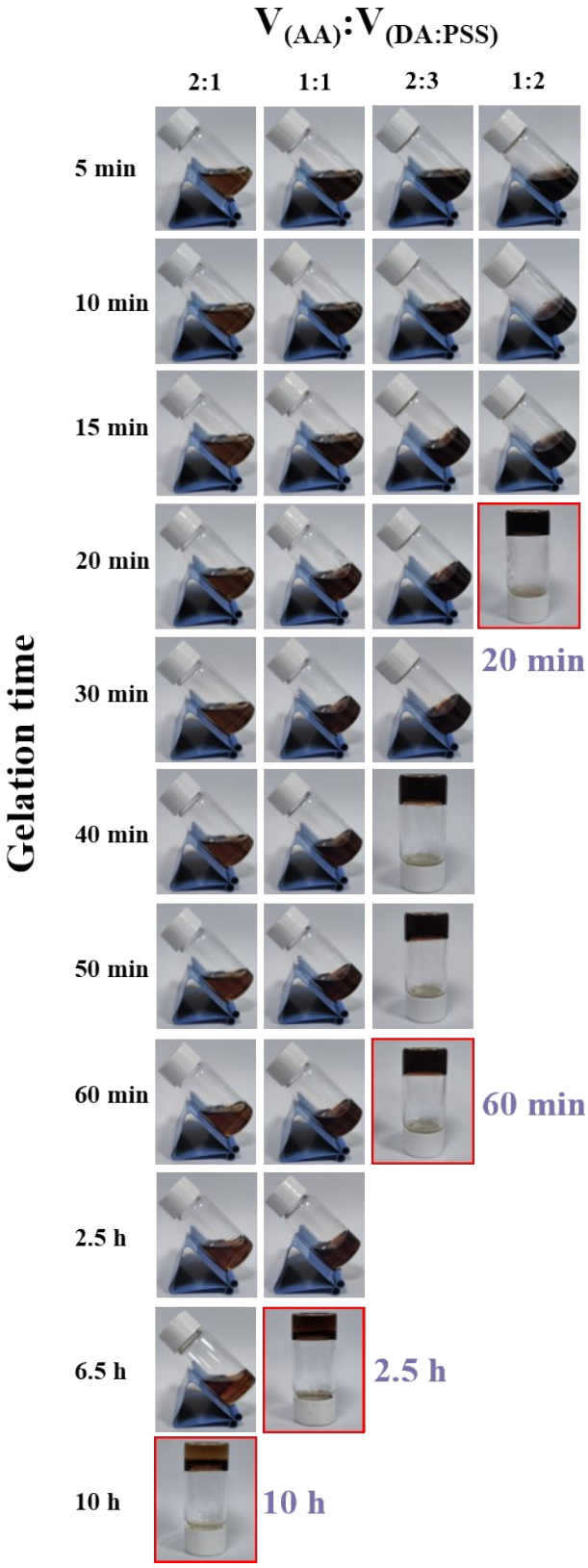

Figure S2 The digital photograph of the gelation process of the mixed solution of AA and DA:PSS. ($V_{(AA)}$:$V_{(DA:PSS)}$ is the volume of AA to the volume of DA:PSS solution, where the concentration of DA and PSS in DA:PSS solution is 0.200 g/mL and 0.400 g/mL, respectively.)

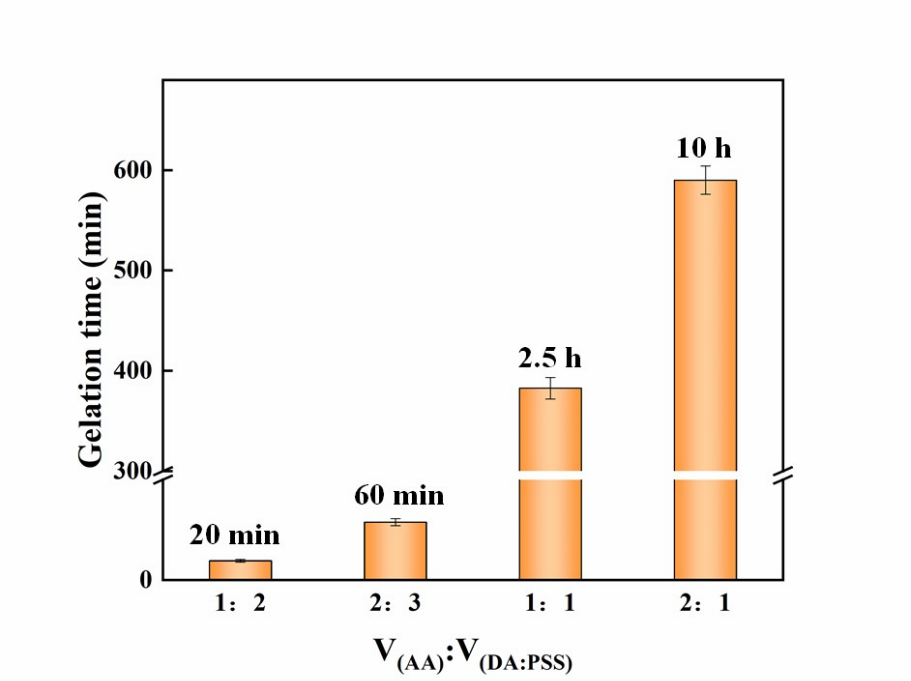

Figure S3 The gelation time of the mixed solution of AA and DA:PSS. ($V_{(AA)}$:$V_{(DA:PSS)}$ is the volume of AA to the volume of DA:PSS solution, where the concentration of DA and PSS in DA:PSS solution is 0.200 g/mL and 0.400 g/mL ,respectively.)

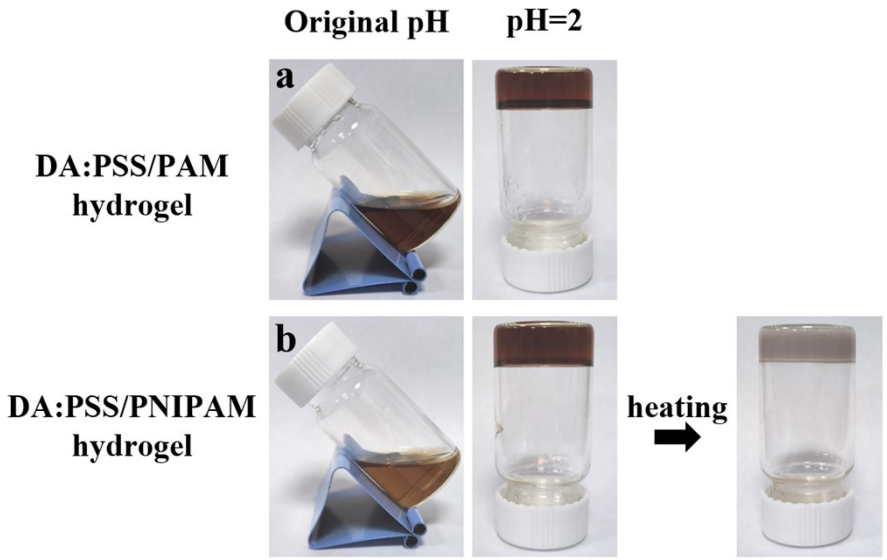

Figure S4 The universality of DA:PSS-initiated strategy for the preparation of hydrogels. (a) DA:PSS/PAM hydrogel polymerized under acidic conditions. (b) DA:PSS/PNIPAM hydrogel polymerized under acidic conditions.

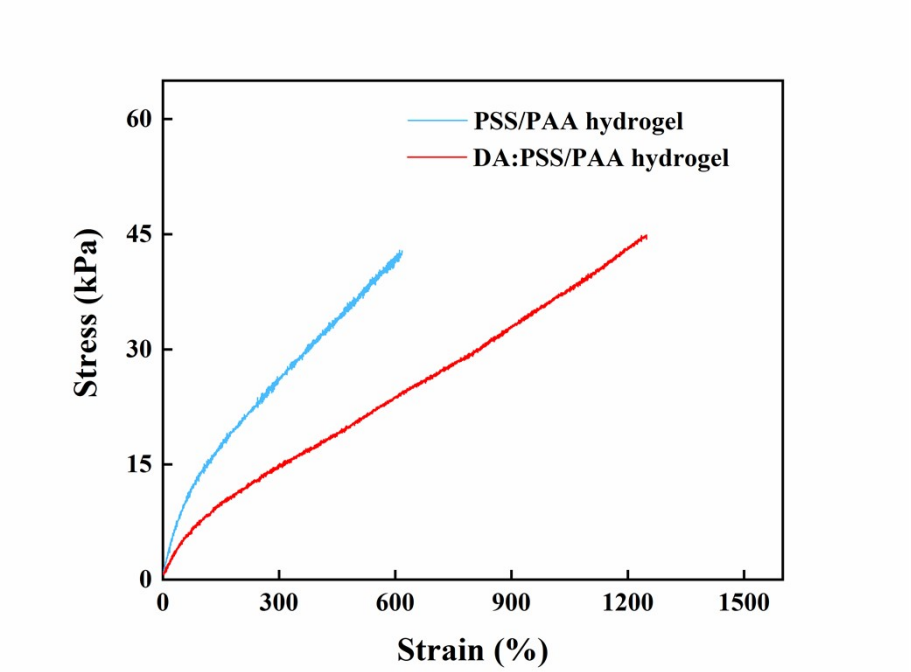

Figure S5 The comparison of the properties of the PSS/PAA hydrogel (using APS as the initiator) and of the DA:PSS/PAA hydrogel.

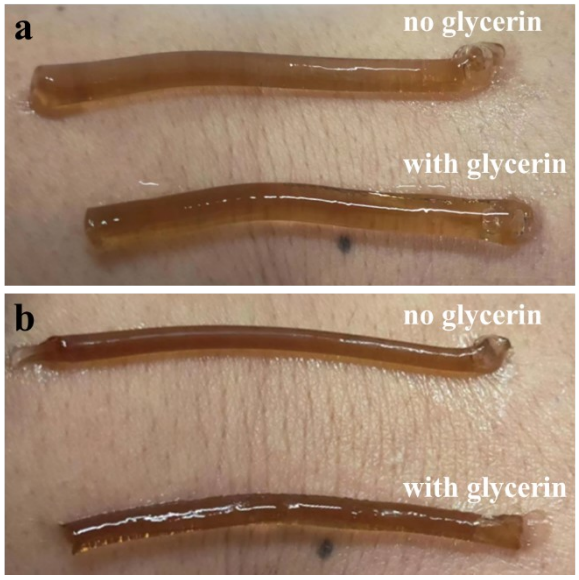

Figure S6 The digital photograph of the DA:PSS/PAA hydrogel attached to the skin with/without coated with glycerin:(a) initial state. (b) attached for 5 h.

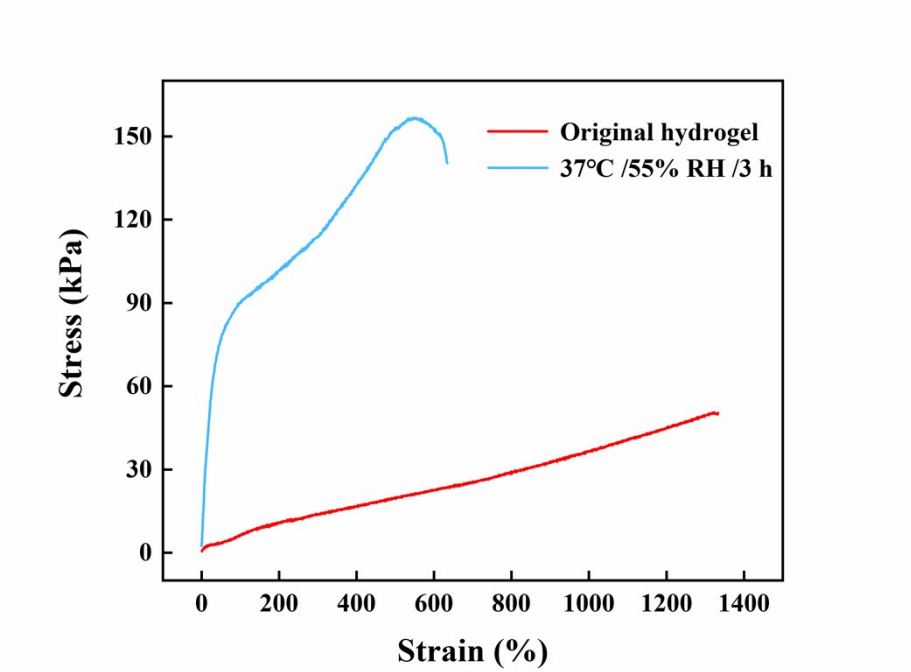

Figure S7 Mechanical properties of DA: PSS/PAA hydrogel before and after placed at 37 ℃ and 55% RH for 3 h.